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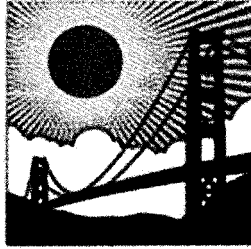


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Commissioners & Docket Control  
Arizona Corporation Commission  
1200 West Washington  
Phoenix, AZ 85007-2996

September 19, 2011

Re: Comments regarding APS 2012 RES Implementation Plan, Docket No. E-01345A-11-0264

Dear Commissioners:

The Vote Solar Initiative (Vote Solar) participated in the Commission's Open Meeting on August 17, 2011, during which Arizona Public Service (APS) and Tucson Electric Power's (TEP) 2012 Renewable Energy Standard (RES) implementation plans were described and discussed. Commissioners asked a number of important questions at the Open Meeting about APS' customers' willingness to pay for clean energy. APS referenced data gathered in the "APS Informed Perception Project Report," published in May 2011 by the ASU Morrison Institute for Public Policy (referred to below as 'ASU Report').

However, several questions were left unanswered, and we believe Commissioners and staff would benefit from a summary of some of the relevant results from the ASU Report, and other statewide polls. These comments compare the polling results to the residential surcharge increases correlated with the options APS includes in its 2012 RES plan.

- 1) **The ASU Report found respondents were on average willing to pay an additional \$3.75 - \$6.31 per month to support clean energy, while another recent Arizona poll showed a majority would pay at least \$10 more per month.**

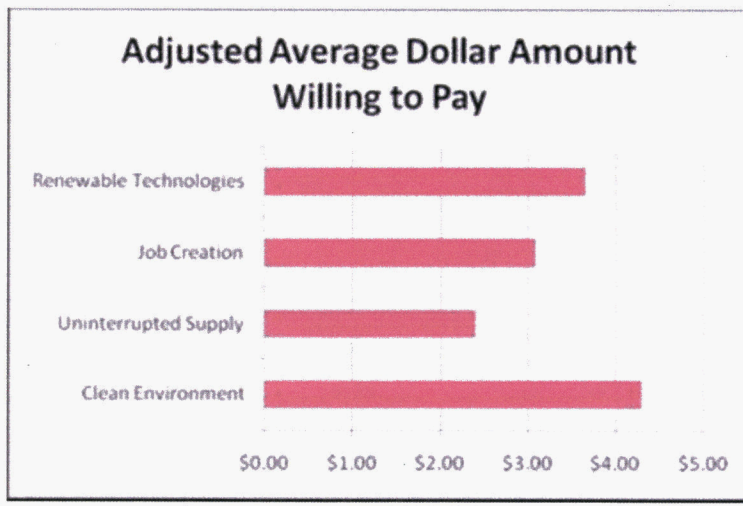
The ASU Report asked 800 APS residential ratepayers whether they would be willing to pay specific dollar amounts to address specific energy issues, including supporting a cleaner environment, an uninterrupted supply of electricity, job creation in the energy industry, and development of renewable energy technologies. Responses indicated that approximately three-quarters of respondents were willing to pay an additional 5% or more of their bills to support a cleaner environment.<sup>1</sup> The mean additional dollar amount that respondents were willing to pay to help develop renewable technologies in particular was \$6.31 per month.

The ASU Report authors developed a second, more conservative set of estimates of respondents' willingness to pay, noting that the mean listed above did not adjust for the bimodal distribution of responses (many respondents said they would be willing to pay either a lot for more renewables, or nothing). This second set of results listed the adjusted average additional willingness to pay for developing renewable technologies at approximately \$3.75 per month, as shown in the graph below, taken directly from the ASU Report. When I contacted them, the report

<sup>1</sup> ASU Report, p.15.

authors at the Morrison Institute were not willing to state on behalf of the organization whether the mean or the adjusted average responses were more representative of APS customers' willingness to pay.<sup>2</sup>

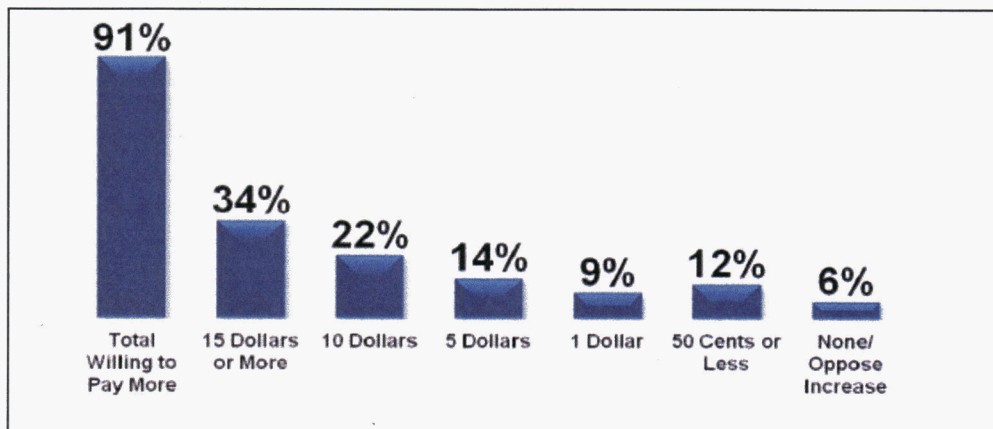
**Figure 1: Adjusted Average Additional Monthly Dollar Amount That Respondents Are Willing to Pay (Figure 9 from ASU Report)<sup>3</sup>**



We note that other polling recently conducted in Arizona shows very strong public support for investment in renewable energy, and records higher willingness to pay for renewable energy than the ASU Report. According to a poll conducted in February 2011 by the bipartisan team of Public Opinion Strategies (POS) and Fairbank, Maslin, Maullin, Metz and Associates (FM3) for 600 Arizona households:

*“Voters have more positive impressions of solar, wind and hydroelectric power than of other energy sources, such as nuclear or coal. They reject the idea that renewable power sources are too unreliable, and while they resoundingly say affordability is a very important factor to them, three-in-five also feel that having more affordable electricity is not worth the pollution caused by coal-burning power plants. In fact, **a majority says it would be willing to pay at least \$10 more per month (with 80% willing to pay \$5 or more)** to increase the use of renewable energy sources like wind and solar power in generating electricity.”<sup>4</sup>*

**Figure 2: POS and FM3 Poll Results, Willingness To Pay for “an increase in the amount of energy needs which are met by renewable sources”**



<sup>2</sup> Email exchange with Eric Hedberg, one of the report authors at ASU Morrison Institute, September 9, 2011.

<sup>3</sup> ASU Report, p. 17.

<sup>4</sup> Fairbänk, Maslin, Maullin, Metz & Associates (D) and Public Opinion Strategies (R). “Key Findings from a Survey of Arizona Voters Regarding Increasing the Use of Renewable Sources for Electricity Production.” March 23, 2011, p. 1.

2) **The increases in residential renewable surcharges proposed in APS's 2012 RES Plan are less than the even the most conservative additional willingness to pay indicated in the ASU Report.**

In APS' 2012 RES Implementation Plan, the utility proposed three different implementation options. The correlating maximum residential renewable surcharges for the three options range from \$5.43 per month to \$6.41 per month. To compare these projected numbers with willingness to pay indicated in the ASU Report, it is necessary to calculate the incremental increase in these caps on monthly surcharges when compared with the monthly caps that were in effect in December 2010, when the ASU Report poll was conducted. Given that the APS residential renewables monthly cap was \$3.46 in December 2010,<sup>5</sup> the table below shows the increase in surcharges from the three APS 2012 options, and how those surcharges compare to the two sets of ASU Report results on customers' willingness to pay for renewables.

**Figure 3: APS Maximum Monthly Renewable Surcharges  
As Percentages of ASU Report Willingness To Pay Results**

	Proposed Maximum Monthly Renewable Surcharge Under 2012 Options	Increase from December 2010 Surcharge Under 2012 Plan Options	Percent of ASU Report respondents' average additional renewables WTP (assuming <u>mean</u> of \$6.41) represented by Increases Under 2012 Plan Options	Percent of ASU Report respondents' average additional renewables WTP (assuming <u>adjusted average</u> of \$3.75) represented Increases Under 2012 Plan Options
<b>December 2010 Maximum Renewable Surcharge for APS Residential Customers</b>	<b>\$ 3.46</b>			
Option 1	\$ 5.43	\$ 1.97	31.22%	52.53%
Option 2	\$ 5.96	\$ 2.50	39.61%	66.66%
Option 3	\$ 6.41	\$ 2.95	46.75%	78.66%

Therefore, based even on the most conservative willingness to pay results in the ASU Report, **APS residential customers are willing to incur larger renewables-related rate increases than those resulting from any of the proposed budget options in APS's 2012 RES plan.** Given that other recent Arizona polls, including the POS/FM3 poll cited above, have found a majority of respondents willing to pay \$10 more per month to support renewables, the ASU Report findings should be viewed as a very conservative estimate of residential customers' willingness to pay more for clean energy.

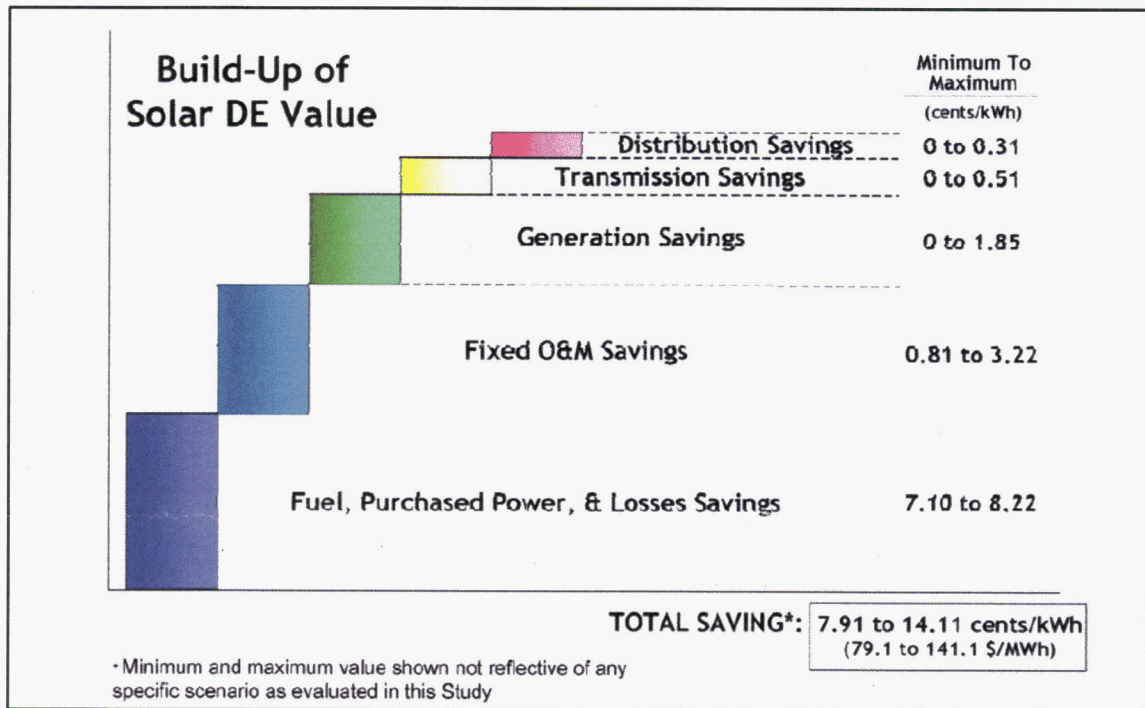
Finally, we'd like to point out that any analysis of costs should also take benefits into consideration as well. For example, a study conducted by RW Beck for APS in 2009 on the operating impacts and valuation of distributed renewable energy valued the benefits of transmission and distribution savings, generation, O&M, fuel and other savings associated with distributed renewables to APS in 2025 at between \$0.79 and \$1.40 per MWh (see figure below).<sup>6</sup> The residential renewables surcharges listed by APS and other utilities may not fully factor in these system benefits, and thus may not be the best representation of renewables' true cost/benefit to customers.

<sup>5</sup> APS' 2010 renewable surcharge cap was confirmed via personal communication with APS staff on September 7, 2011.

<sup>6</sup> R.W. Beck, Inc., "Distributed Renewable Energy Operating Impacts and Valuation Study, Prepared for Arizona Public Service," January 2009, p. 6-14.



Figure 4: RW Beck Study Results, Elements of APS's Solar DE Savings in 2025



In conclusion, we encourage the Commission to continue to prioritize the rapid development of Arizona's solar potential in this and other RES-related dockets, bolstered by the knowledge that the vast majority of Arizona ratepayers support spending a little more now to reap the many rewards of a clean energy future.

Sincerely,

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 The Vote Solar Initiative  
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